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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,477	07/02/2003	Robert W. Boesel	COM0201 #4 (038.0450)	9531
50/996 7590 07/27/2009 INGRASSIA FISHER & LORENZ, P.C. (FS) 7010 E. COCHISE ROAD SCOTTSDALE, AZ 85253				
EXAMINER				
MALEK, LEILA				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
07/27/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ifllaw.com

Office Action Summary

Application No.

10/613,477

Applicant(s)

BOESEL ET AL.

Examiner

LEILA MALEK

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendments received on 03/23/2009.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 13 of copending Application No. 10/613,825 in view of Wang (US 2002/0094017). Claims 1 and 13 of copending Application disclose all the subject matters claimed in claim 1 of the instant Application, except that the system comprising the despreader and the demodulator is a communication system. Claims 1 and 13 of the copending Application also do not disclose that the demodulator is adapted to produce a symbol estimate and the searcher is adapted to determine multi-path components. Wang, in the same field of

endeavor, shows a communication system (see Fig. 4) comprising a searcher (see block 208) and demodulator (see block 206). Wang further discloses that searcher 208 is adapted to determine multi-path components (see the abstract and paragraph 0024) and demodulator 206 is adapted to produce a symbol estimate (i.e. retrieving the communication signal, see paragraph 0031). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus disclosed by the Applicant in claims 1 and 13 of copending Application as disclosed by Wang to recover the transmitted signal at the receiver.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 2002/0094017), in view of Endo et al. (hereafter, referred as Endo) (US 5,461,630).

As to claim 13, Wang discloses a method of processing digital communication signals in a digital communication system, comprising a searcher 208 and a demodulator 206 (See Fig. 4), the method comprising (see the abstract and Fig. 4): receiving digital chip samples (see the input of block 200, and paragraphs 0007 and 0037, where Wang discloses that the received signal has been de-spreaded, which means that the received signal is a spreaded signal in the form chips). Wang further

discloses providing one of an even or odd digital samples to a searcher wherein the searcher is adapted to determine multi-path components in the digital communication signals (see the abstract and paragraph 0030-0032). Wang discloses all the subject matters claimed in claim 13, except for storing even and odd samples in separate buffers and providing only one of the one or odd samples to the demodulator. Endo discloses a system (see Fig. 5) for storing even samples of the digital samples in a first buffer of a plurality of buffers (memory circuit has been interpreted as buffer) (see the abstract and column 1, line 56—column 2, line 6); storing odd phase samples of the digital samples in a second buffer of the plurality of buffers (see the abstract); providing the even phase digital samples or the odd phase to a demodulator, wherein the demodulator is adapted to produce a symbol estimate based on the even phase digital samples or the odd phase digital samples (see the abstract and Fig. 5, units 10, 11, 12, and 14). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Wang as suggested by Endo to reduce the noise in the system (see column 2, lines 1-40) (i.e. in a situation where one of the even or odd sample groups is corrupted, at least one output from the demodulator or the searcher would be noise free, because it has been generated based on the uncorrupted sample group).

5. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang and Endo, further in view of Easton et al. (hereafter, referred as Easton) (US 6,985,516).

As to claim 14, Wang and Endo disclose all the subject matters claimed in claim 13, except for entering a power down state upon providing a sufficient number of digital

samples to the searcher. Easton discloses entering a power down state upon providing a sufficient number of digital samples to the searcher (see col.1, lines 35-52; col.8, lines 41-52; and col.13). It would have been obvious to one of ordinary skill in the art to include a power up/down circuit in the system taught by Wang and Endo in order to save power during times of inactivity.

As to claim 15, Easton further discloses a power control operable to power-down circuitry after the processing of all desired multi-path components and to power-up when the next buffer of sample data is ready to be processed (column 13, lines 45-59). It would have been obvious to one of ordinary skill in the art to include a power up/down circuit in the system taught by Wang and Endo in order to save power during times of inactivity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEILA MALEK whose telephone number is (571)272-8731. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek
Examiner
Art Unit 2611

/L. M./
/Leila Malek/
Examiner, Art Unit 2611

/Mohammad H Ghayour/
Supervisory Patent Examiner, Art Unit 2611